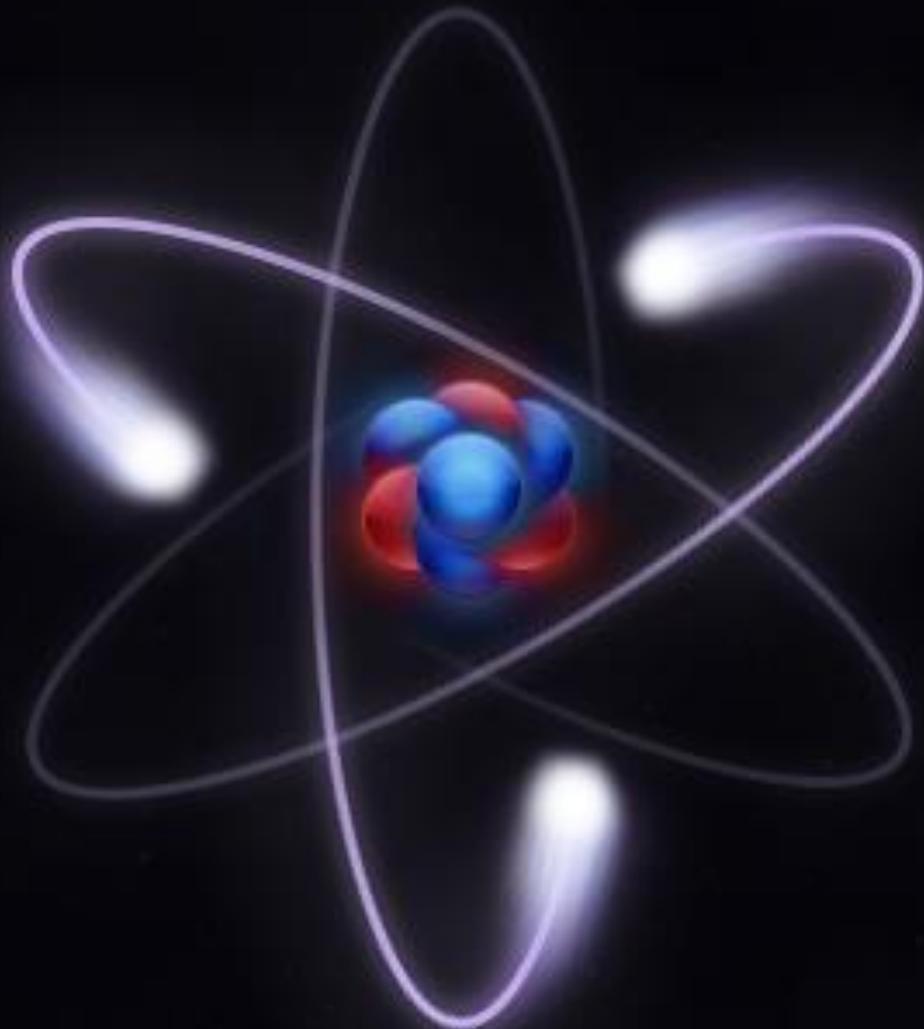


# Microkosmos



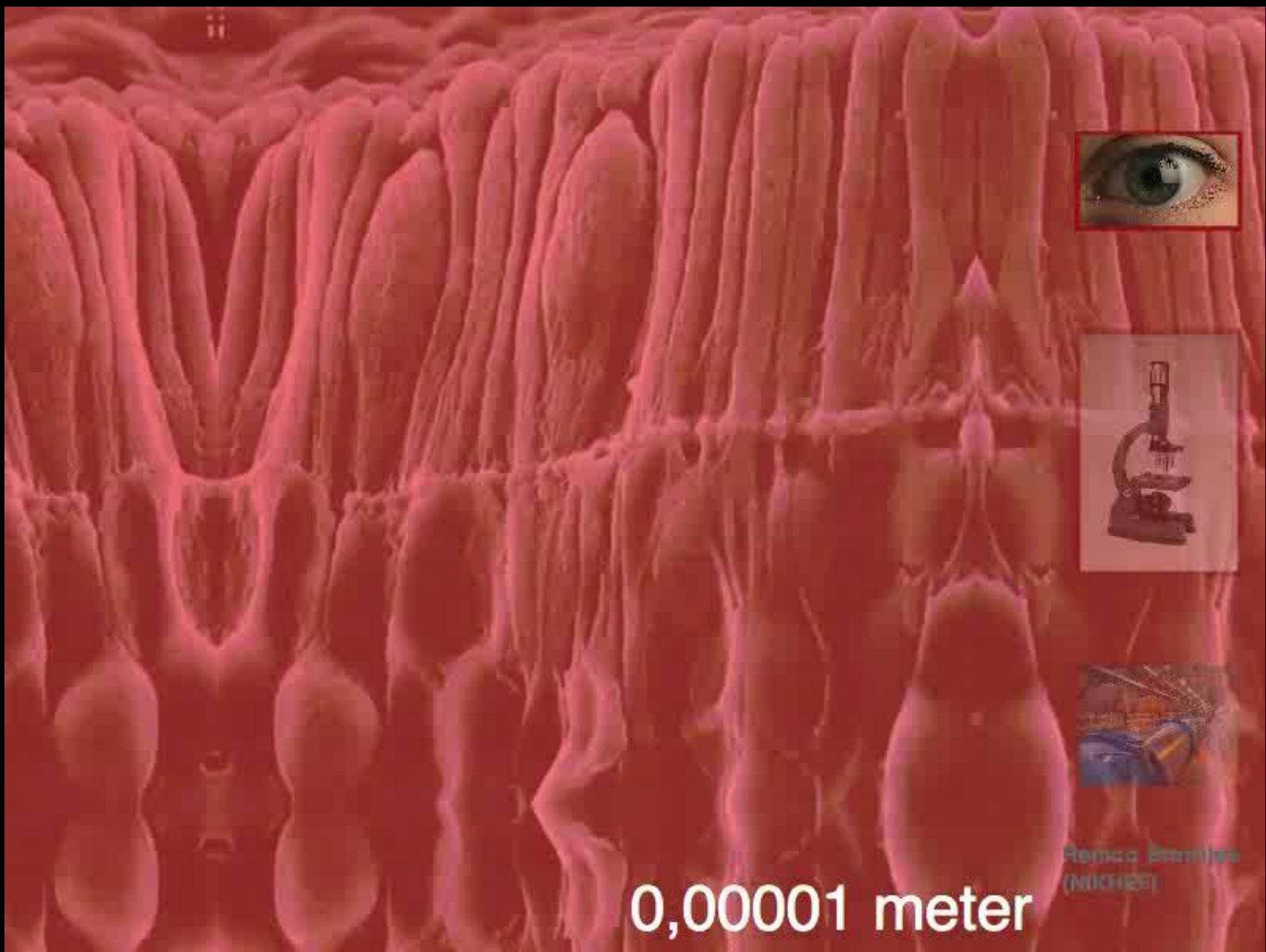
**Frank Linde (Nikhef), 25 maart 2015, Almere Theater**

# *Elementaire bouwstenen*



Remco Brantjes  
(NIKHEF)

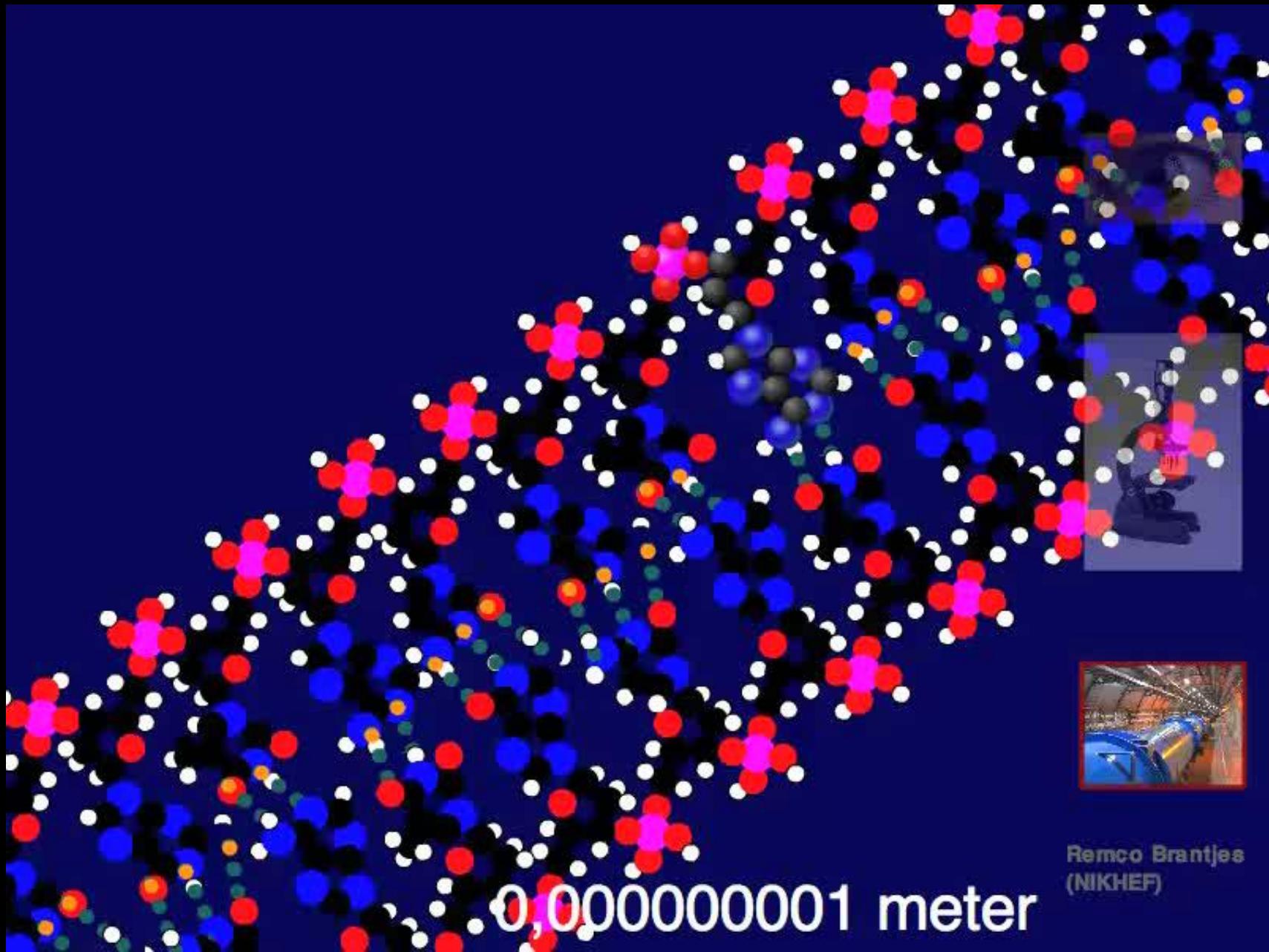
# *Elementaire bouwstenen*



0,00001 meter

Ronald Bannink  
(INCH2E)

# *Elementaire bouwstenen*



0,00000001 meter

Remco Brantjes  
(NIKHEF)

# *Experiment: deeltjesversnellers*

# *Experiment: deeltjesversnellers*



# *Experiment: deeltjesversnellers*



**het idee! 1964**



Higgs  $\rightarrow e^- e^+ e^- e^+$

**ATLAS @ the Large Hadron Collider (Zwitserland)**

# Experiment: deeltjesversnellers



het idee!

1964



ontdekking

2012



Higgs  $\rightarrow e^- e^+ e^- e^+$

ATLAS @ the Large Hadron Collider (Zwitserland)

# Experiment: deeltjesversnellers



het idee!

1964



ontdekking

2012



Nobelprijs

2013

ATLAS @ the Large Hadron Collider (Zwitserland)



Higgs  $\rightarrow e^- e^+ e^- e^+$

# Fundamentele krachten



**zwaarte  
kracht**



**elektromagnetische  
kracht**



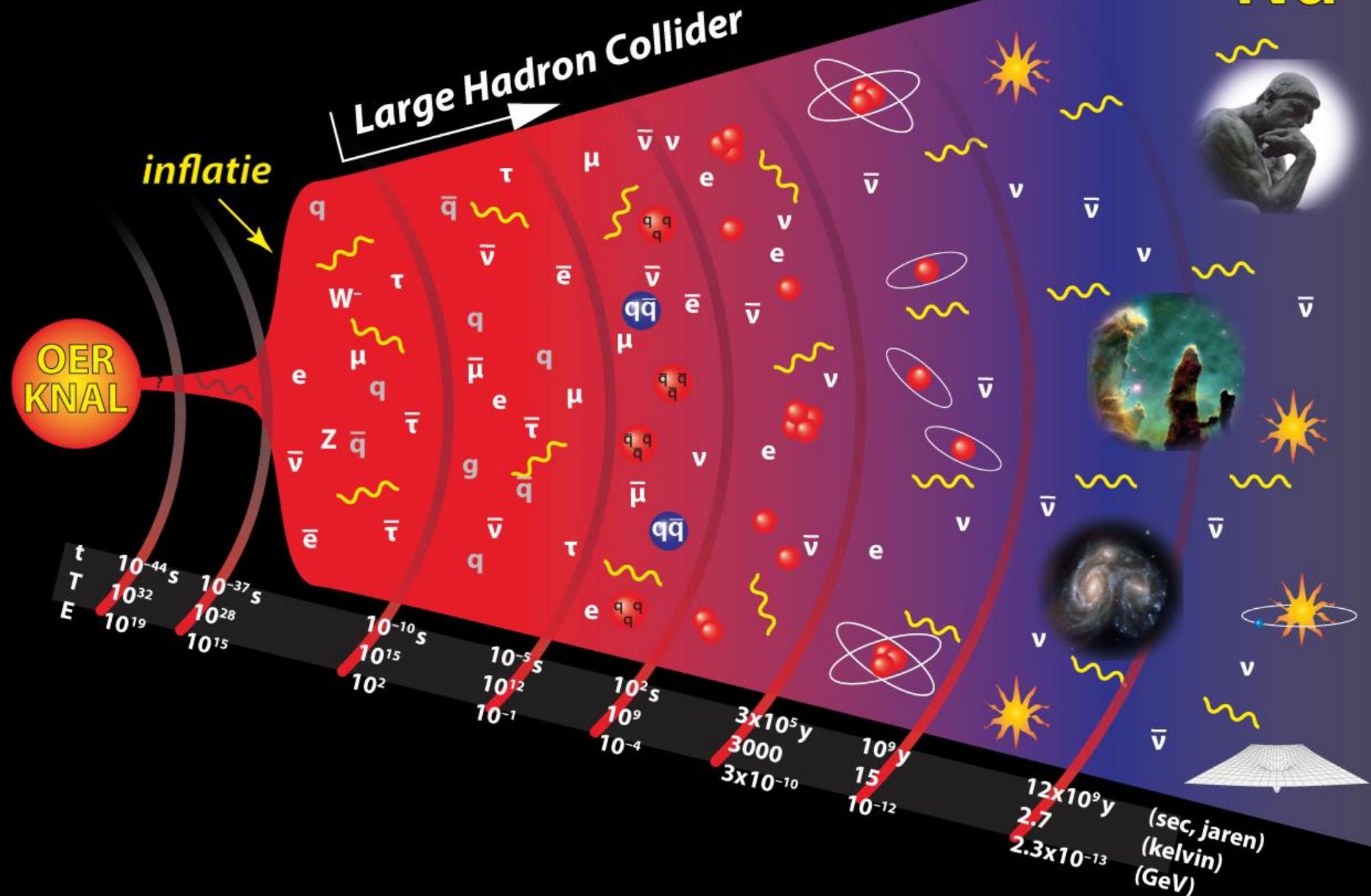
**sterke  
kernkracht**



**zwakke  
kernkracht**

# *Oerknal*

# Oerknal



# *Experiment: astrodeeltjes*



# World Wide Web

www.

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where the World Wide Web was born...

Particle Accelerator  
(underground)

... 5 minutes from here!